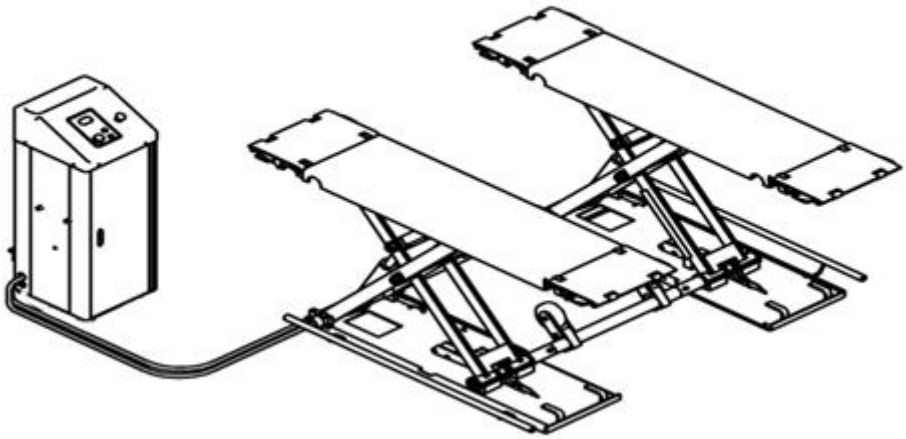
WE ARE HERE TO SURPRISE

Jema Autolifte A/S
we are here to surprise!

JA3000S-E

Service scissor Lift
Lifting Capacity: 3000KG

INSTALLATION, OPERATION
AND MAINTENANCE MANUAL
ORIGINAL INSTRUCTION



Read this entire manual carefully and completely before installation and operation of the lift.

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User's Records

Fill the following blanks with the information on the nameplate.

Model No. : _____

Serial No. :_____

Production Date:_____

The following specially trained people are permitted to operate and maintain this lift.

1.
2.
3.
4.
5.
6.
7.
8.
9.
10.

Installation Records

Model No. : _____

Serial No. : _____

Customer's Name:_____

Installation Date:_____

Declaration

The above mentioned lift has been correctly installed and all its functions including the reliability of safety locks have passed strict tests. Therefore we hereby declare that this lift is in normal working condition when installation finished.

Installation date **Installer's signature**

_____ _____

User's signature

_____

1. IMPORTANT SAFETY INSTRUCTIONS

1.1 Important notices

JEMA AUTOLIFTE will offer two-year's quality warranty，during which any quality problem will be properly solved to the user's satisfaction. However, we will not take any responsibility for whatever bad consequence resulted from improper installation and operation, overload running or unqualified ground condition.

This service scissor lift is especially fit for tire service or other quick service around vehicles. Users must always bear in mind that this JA3000S-E is specially designed for lifting cars or other vehicles, so never use it for any other purposes. Otherwise, we, as well as our sales agency, will not bear any responsibility for accidents or damages of the lift.

Make sure to pay careful attention to the label of the lifting capacity attached on the lift and never try to lift cars with its weight beyond. Read this manual carefully before operating the machine so as to avoid economic loss or personnel casualty incurred by wrong operation. Without our professional advice, users are not permitted to make any modification to the control unit or whatever mechanical unit.

1.2 Qualified personnel

1.2.1 Only these qualified staff, who have been properly trained, can operate the lift.

1.2.2 Electrical connection must be done by a competent electrician.

1.2.3 People who are not concerned are not allowed in the lifting area.

1.3 Danger notices

1.3.1 Do not install the lift on any asphalt surface.

1.3.2 Read and understand all safety warnings before operating the lift.

1.3.3 Do not leave the controls while the lift is still in motion.

1.3.4 Keep hands and feet away from any moving parts. Keep feet clear of the lift when lowering.

1.3.5 Only these properly trained personnel can operate the lift.

1.3.6 Do not wear unfit clothes such as large clothes with flounces, tires, etc, which could be caught by moving parts of the lift.

1.3.7 To prevent evitable incidents, surrounding areas of the lift must be tidy and with nothing unconcerned.

1.3.8 The lift is simply designed to lift the entire body of vehicles, with its maximum weight within the lifting capacity.

1.3.9 Always insure the safety locks are engaged before any attempt to work near or under the vehicle. Never remove safety related components from the lift. Do not use if safety related components are damaged or missing.

1.3.10 Do not rock the vehicle while on the lift or remove any heavy component from vehicle that may cause excessive weight shift.

1.3.11 Check at any time the parts of the lift to ensure the agility of moving parts and the performance of synchronization. Ensure regular maintenance and if anything abnormal occurs, stop using the lift immediately and contact our dealers for help.

1.3.12 Lower the lift to its lowest position and do remember to cut off the power source when service finishes.

1.3.13 Do not modify any parts of the lift without manufacturer’s advice.

1.3.14 If the lift is going to be left unused for a long time, users are required to:

a. Disconnect the power source;

b. Empty the oil tank;

c. Lubricate the moving parts with hydraulic oil.

1.4 Condition notices

Generally, this machine will be installed on the following conditions:

1.4.1 supply voltage:0.9-1.1 nominal supply voltage

1.4.2 source frequency:0.99-1.01 nominal frequency

1.4.3 Ambient temperature: 50° C - 400° C

1.4.4 Altitude:shall be at altitudes up to 1000m above mean sea level

1.4.5 Relative humidity: not exceed 50% at 400° C

1.4.6 Atmosphere: Free from excessive dust, acid fume, corrosive gases and salt.

1.4.7 Avoid exposing to direct sunlight or heat rays which can change the environmental temp.

1.4.8 Avoid exposing to abnormal vibration.

1.4.9 Electrical equipment shall withstand the effects of transportation and storage temperature within a range of -25° C to 55° C and for short periods not exceeding 24 hours at up to +70° C

Attention: For environment protection, please dispose the disused oil in a proper way.

1.5 Warnings (Read and understand all safety warnings before operation)

All safety warning signs attached on the machine are for the purpose of drawing the user's attention to safety operation. The labels must be kept clean and need to be replaced when they are worn-out or have dropped. Read the explanations of the labels carefully and try to memorize them.

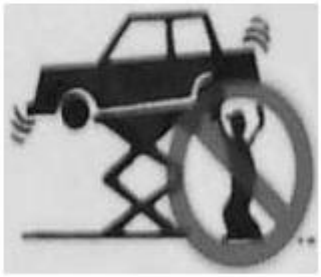
Read and understand the manual first.

Only trained operator can use the lift.

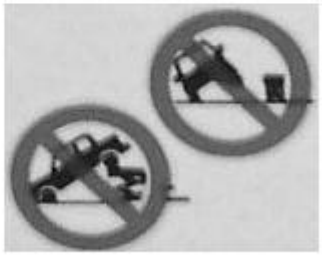
Keep the lifting area unobstructed.

Don't stay under the vehicle when lowering or raising.

Ensure gravity of the vehicle located center of the lift.



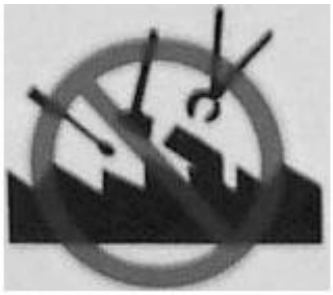
Avoid excessive rocking of vehicle while on the lift.



Do not lift with vehicle staying only on one platform.

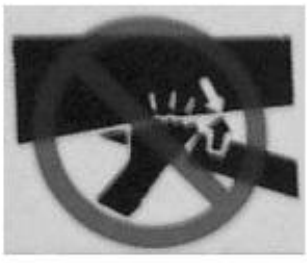
Remove auxiliary stands before lowering.

Clear area if vehicle is in danger of falling.



Do not make any change on the safety assembly.

Stay clear of the lift when lowering.



Avoid touching pinch points when lift is moving.

High voltage! Never touch!

1.6 Sound Level

The sound emitted from the lift should not exceed 65DB. For the sake of your health, we suggest putting a noise detector in your working area.

1.7 Training

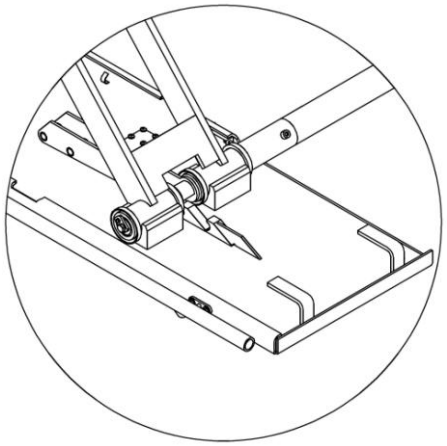
Only properly trained people are allowed to operate the lift. We are quite willing to provide professional training for the users when necessary.

2. Overview of the lift

2.1 General descriptions

The lift is driven by an electro-hydraulic system. The gear pump delivers hydraulic oil to oil cylinders and pushes upwards their pistons to raise the platforms. For this model, we offer two safety solutions: one with anti-surge valve in hydraulic system to prevent sudden drop down of platform in case the oil hose broke, the other with anti-surge valve and an extra pneumatic safety lock.

Pneumatic safety lock.

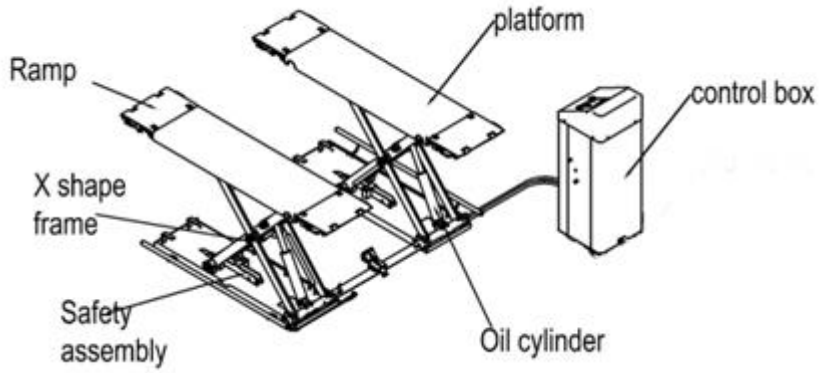


2.2 Technical data

Model	Lifting capacity	Lifting time	Lifting height	Power supply
JA3000S-E	3000KG	30S	1000mm	220V/240V,single phase

Weight on JA3000S-E = 500 KG

2.3 Construction of the lift



3. Installation instructions

3.1 Preparations before installation

3.1.1 Tools and equipments needed

√ Electrical drill

√ Open wrenches

√ Screw drivers

√ Adjustable spanners

√Inner hexagon spanners

3.1.2 List for parts checking ---Annex 1 (Packing list)

Unfold the package and check if any parts missed as per Annex 1. Do not hesitate to contact us in case any parts missed, but if you do not contact us and insist installing upon the lack of some parts, JEMA AUTOLIFTE as well as our dealers will not bear any responsibility for this and will charge for any parts subsequently demanded by the buyer.

3.1.3 Ground conditions

The lift should be fixed on a smooth and solid concrete ground with its strength more than 3000psi, tolerance of flatness less than 5mm and minimum thickness of 200mm. In addition, newly built concrete ground must undergo more than 28days' cure and reinforcement.

3.2 Precautions for installation

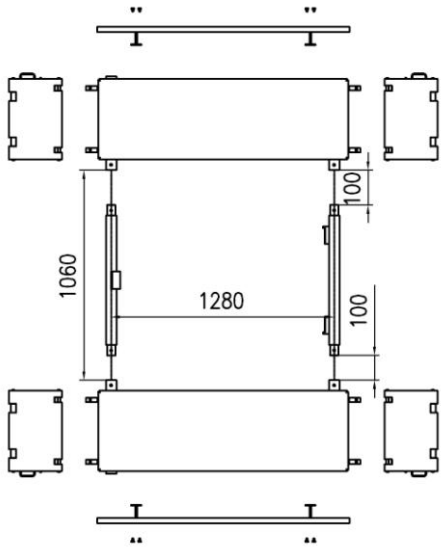
3.2.1 Joints of oil hose must be firmly connected in order to avoid leakage.

3.2.2 All bolts should be firmly screwed up.

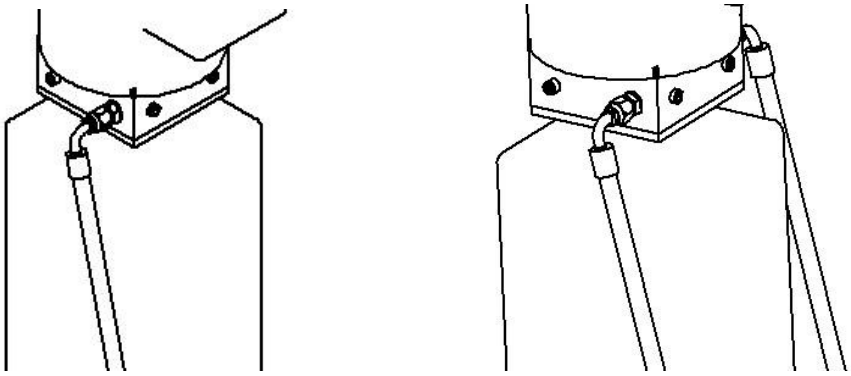
3.2.3 Do not place any vehicle on the lift in the case of trial running.

3.3 Installation

Step 1: Remove the packaging and take the two mechanical assemblies and the control box to the designated installing place. Please do read and understand this manual thoroughly before next step.



Step 2: Connect the oil hose to the pump assembly with a proper wrench, it has no effect which side the oil hoses are connected to. (Make sure the hose end is clean).



Step3: Connect the limit switch wires to the wiring terminals in the control box. Make sure to connect NO.1 wire with NO.1 terminal , NO.2 wire with NO.2 terminal and so forth.

Step4: Link the air hose to compressed air source. (This step is only for the type with pneumatic safety lock)

8mm connection direct to compressor
6mm connection for the lift

Step5: Adjustment of lowering speed

Before the lift is used, the user must be sure to adjust the lowering speed properly according to user's request. It is important to bear in mind that the lift has a maximum capacity of 3000 kg. Which means the lift is not lower too fast with max capacity.

Lowering speed is adjusted on the screw on the right hand side of the engine. The adjustment is done as follow,
the user rise the lift, and then starts to lower the lift when the screw is screwed in the lower speed will decrease and if the user screw the screw out the lowering speed will increase NB. Remember to adjust before load of car and it is important to remember the lift will lower much faster when there is load on the lift.

A explanation video how to adjust lowering speed and pump pressure can be found here:
jemaautolifte.dk/adjustment_of_220V_engine.wmv

Step 6: Fix the base frame. (Optional)

JA3000S-E is portable. In other words users may use it without having it placed and fixed on the ground. Nevertheless, if you want to have it fixed, do fix it on a smooth and solid concrete surface.

Step 7: Trial testing with load. (Do not use cars for trial testing)

Load applied shall not exceed 2500KG. Add 10L of hydraulic oil when all oil hose are gathered.
This step is of particular importance for it can check if the oil hose and air hose are well connected. Connections are qualified when there is no abnormal sound or leakage after having been tested for 2 or 3 times.

3.4 Items to be checked after installation

S/N	Check items	YES	NO
1	Are two platforms on the same level?		
2	Are oil hoses well connected?		
3	Are electrical connections correct?		
4	Do valves on the pump assembly leak?		

4. Operation instructions

4.1 Precautions

4.1.1 Check all the joints of oil hose. Only when there is no leakage, the lift can start work.

4.1.2 The lift, if its safety device malfunctions, shall not be used.

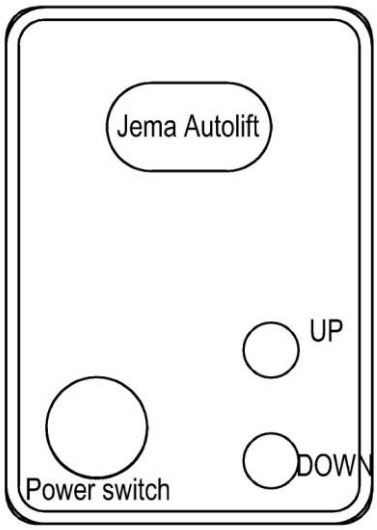
4.1.3 The machine shall not lift or lower an automobile if its center of gravity is not positioned midway of the rising platforms Otherwise, the JEMA AUTOLIFTE as well as our dealers will not bear any responsibility for any consequence resulted thereby.

4.1.4 Operators and other personnel concerned should stand in a safety area during lifting and lowering process.

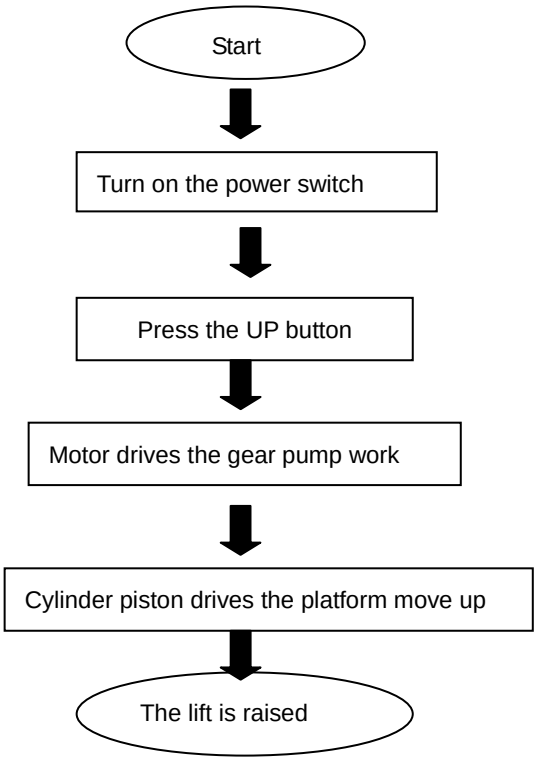
4.1.5 When platforms rise to the desired height, switch off the power at once to prevent any wrong operation done by unconcerned people.

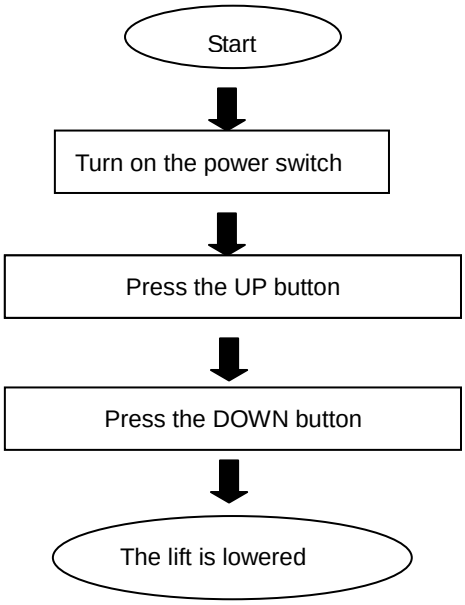
4.1.6. Make sure the safety lock of the lift is engaged before start working under the vehicle and no people under the vehicle during lifting and lowering process.

4.2 Descriptions of control box



4.3 Flow chart for operation


Start
Turn on the power switch
Press the UP button
Motor drives the gear pump work
Cylinder piston drives the platform move up
The lift is raised



4.4 Operation instructions

Remark: Only authorized staff can adjust the system pressure on the power unit.

Raise the lift

1.Make sure that you have read and understood the operation manual before operation.

2.Drive and park the vehicle midway between two platforms.

3.Place the four rubber pads under the prop-points of the vehicle and ensure car's gravity have fallen on the rubber pads.

4.Press the UP button on the control box until rubber pads have touched the prop-points of vehicle.

5. Keep on pressing the UP button to lift the vehicle a bit higher from the ground and check again if the vehicle is in a safe position.

6. Having raised the vehicle to the required height, operators must check again the safety issue before performing maintenance or repair work,

Lower the lift

1.Switch on.

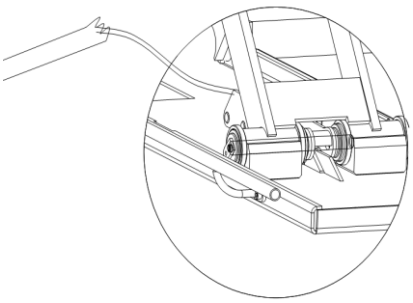
2.Press the UP button release the safety lock, then press the DOWN to lower the lift, to the wanted height.

3.If the lift is on minimum drive away the vehicle.

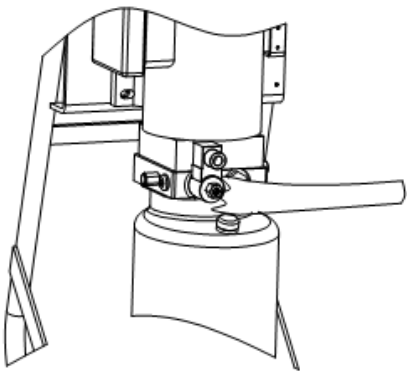
4.5 Emergency lowering in case of no power

The safety lock is not engaged :

a. Tie up the safety teeth on both sides with rope; pull upward the rope making the safety teeth unlocked.

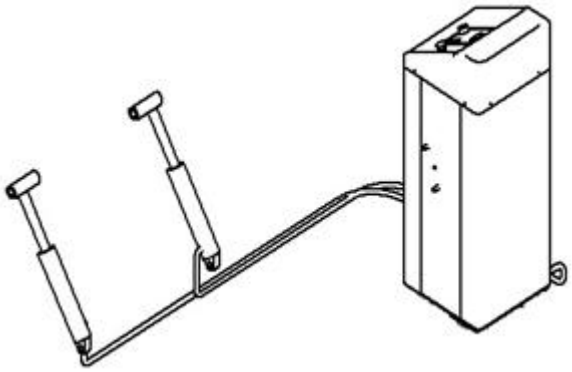


b.Having the safety teeth unlocked, manually loose the core of electro-magnetic valve on the pump assembly. This screw decides the lowering speed. The screw is going in, the lift will lower slower, the screw is going out the lift will lower faster.

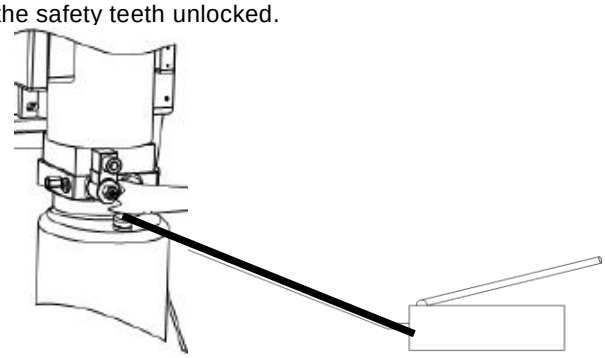


The safety lock is engaged:

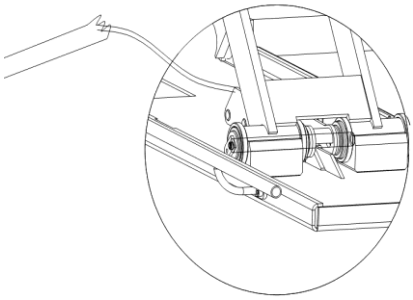
a.Screw off the fitting (opposite to the oil out-let) to connect a hand pump.(Optional)



b.Connect the hydraulic assembly with the optional hand pump. Press down the handle of the pump to raise the platforms to have the safety teeth unlocked.



c.Pull up the safety teeth and tie up them up.



5. Trouble Shooting

ATTENTION: If the trouble could not be fixed by yourself, please do not hesitate to contact us for help .We will offer our service at the earliest time we can. By the way, your troubles will be judged and solved much faster if you could provide us more details or pictures of the trouble.

TROUBLES	CAUSE	SOLUTION
Motor does not run and will not raise	The wire connection is loose.	Check and make a good connection.
	The motor is burnt	Replace it.
	The limit switch is damaged or the wire connection is loose.	Connect it or adjust or replace the limit switch.
Motor runs but will not raise	The motor run reversely.	Check the wire connection.
	Overflow valve is loose or jammed.	Clean or adjust it.
	The gear pump is damaged.	Replace it.
	Oil level is too low.	Add oil.
	The oil hose became loose.	Tighten it.
	The cushion valve became loose or jammed.	Clean or adjusts it.
Platforms go down slowly after being raised	The oil hose leaks.	Check or replace it.
	The oil cylinder is not tightened.	Replace the seal.
	The single valve leaks.	Clean or replace it.
	The overflow valve leaks.	Clean or replace it.
	Electrical unloading valve leaks.	Clean or replace it.
Raising too slow	The oil filter is jammed.	Clean or replace it.
	Oil level is too low.	Add oil.
	The overflow valve is not adjusted to the right position.	Adjust it.
	The hydraulic oil is too hot (above 45°).	Change the oil.

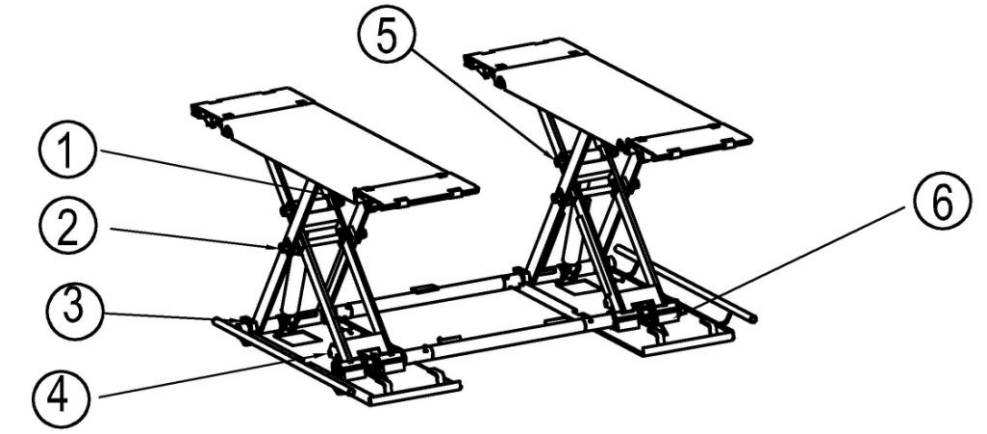
	The seal of the cylinder is abraded.	Replace the seal.
Lowering too slow	The throttle valve jammed.	Clean or replace.
	The hydraulic oil is dirty.	Change the oil.
	The anti-surge valve jammed.	Clean it.
	The oil hose jammed.	Replace it.

6. Maintenance

Easy and low cost routine maintenance can ensure the lift work normally and safely. Following are requirements for routine maintenance. You may choose the frequency of routine maintenance by consulting your lift's working conditions and time.

THE FOLLOWING PARTS NEED TO BE LUBRICATED

S/N	Description
1	Small idler wheel
2	Rotor shaft
3	U-shape block
4	Safety shaft
5	Rotor shaft of oil tank
6	Slider



6.1. Daily checking items before operation

The user must perform daily check. Daily check of safety lock system is very important – the discovery of device failure before action could save your time and prevent you from great loss, injury or casualty.

·Before operation, judge whether the safety lock is engaged by sound.

·Check whether oil hose well connected and whether it leaks or not.

·Check the electrical system.

·Check whether plug bolts firmly screwed.

·Check if safety teeth and safety block matched well or not.

6.2.Weekly checking items

·Check the flexibility of moving parts.

·Check the working conditions of safety parts.

·Check the amount of oil left in the oil tank. Oil is enough if the platforms can be raised to highest position. Otherwise, oil is insufficient.

·Check whether plug bolts firmly screwed.

6.3. Monthly checking items

·Check whether plug bolts firmly screwed.

·Check the tightness of the hydraulic system and screw firm the joints if it leaks.

6.4. Yearly checking items

·Empty the oil tank and check the quality of hydraulic oil.

·Wash and clean the oil filter.

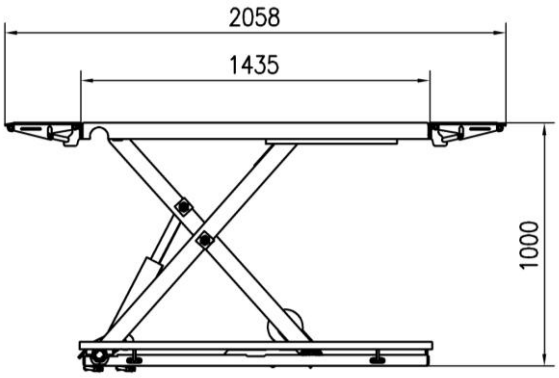
If users strictly follow the above maintenance requirements, the lift will keep in a good working condition and meanwhile accidents could be avoided to a large extent.

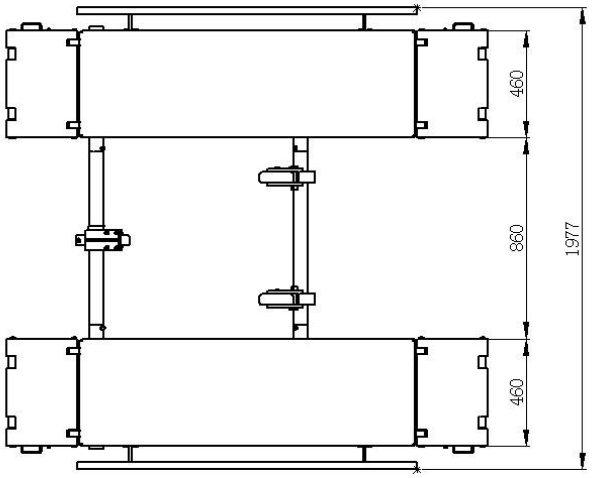
7. ANNEX

Annex 1，Packing List of the whole lift

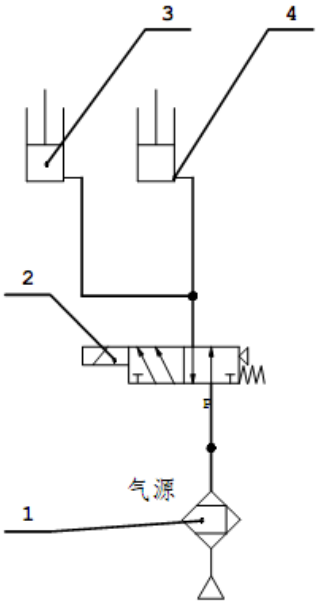
S/N	Name	Qty
1	JA3000S-E Mechanical Assembly	2
2	Movable control box with hydraulic system	1
2.1	Wheel	2
2.2	Connection kit	1
2.3	All directional wheel	1
3	Feet protector	2
4	Connection pipe	2
5	Inside hex screw	32
6	Rubber pad	4

Annex2，Overall diagram



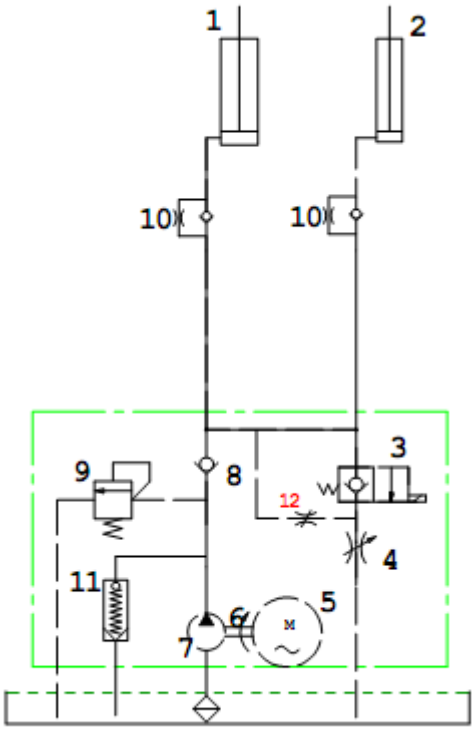


Annex3，Diagram for pneumatic system.



1. Air filter
2. Pneumatic solenoid valve
3. Pneumatic cylinder for the main platform
4. Pneumatic cylinder for the assistant platform

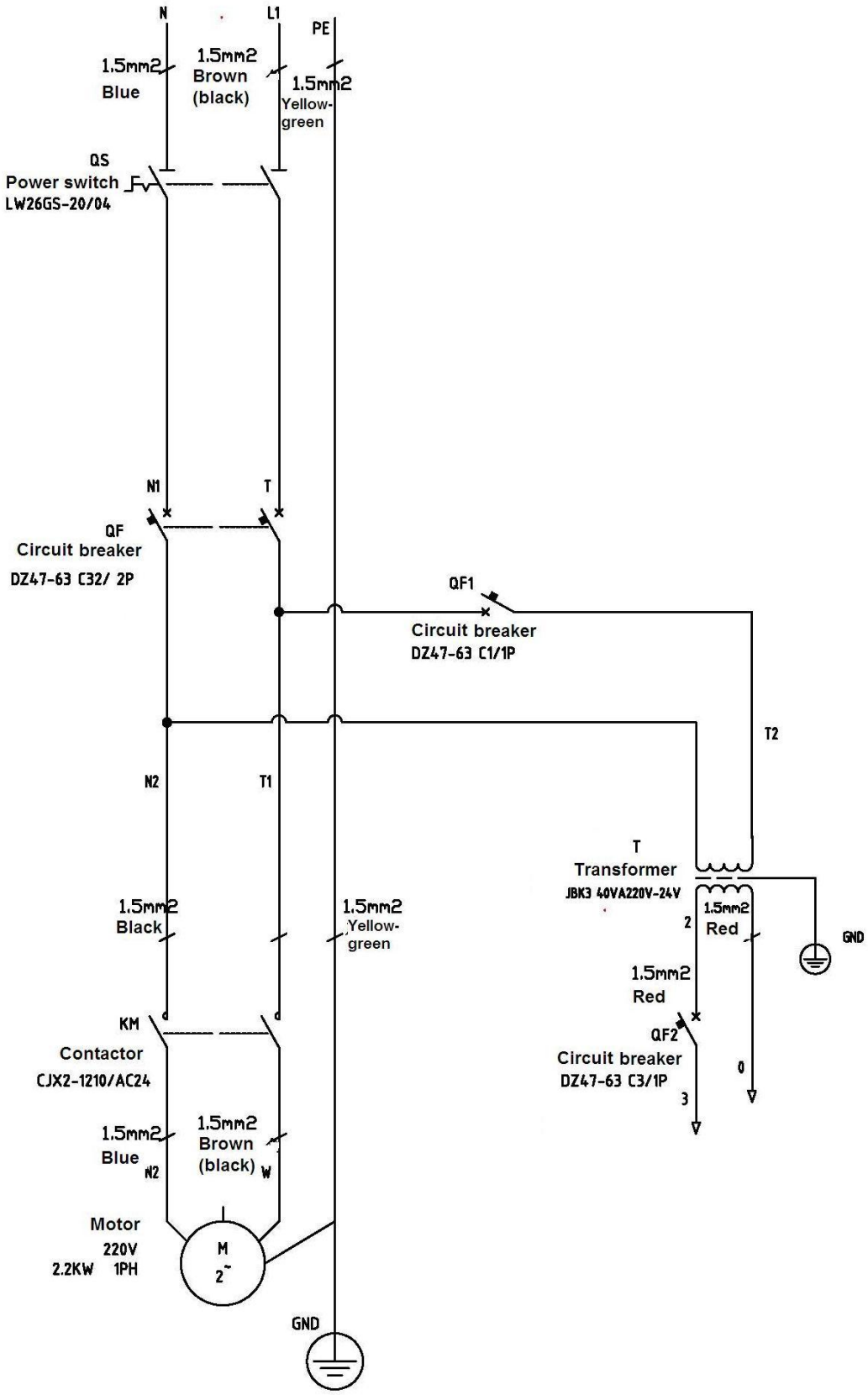
Annex 4，Hydraulic working system

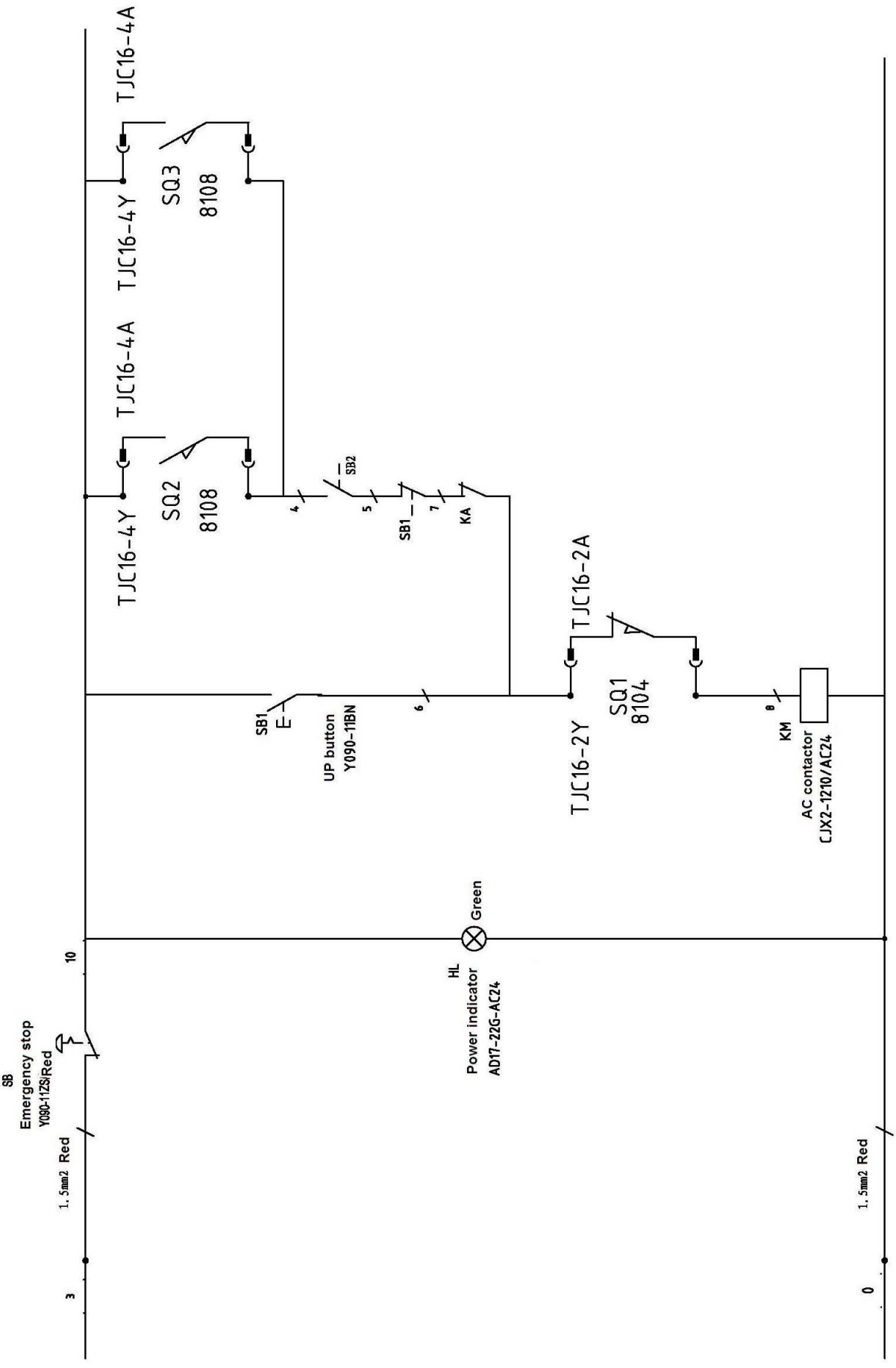


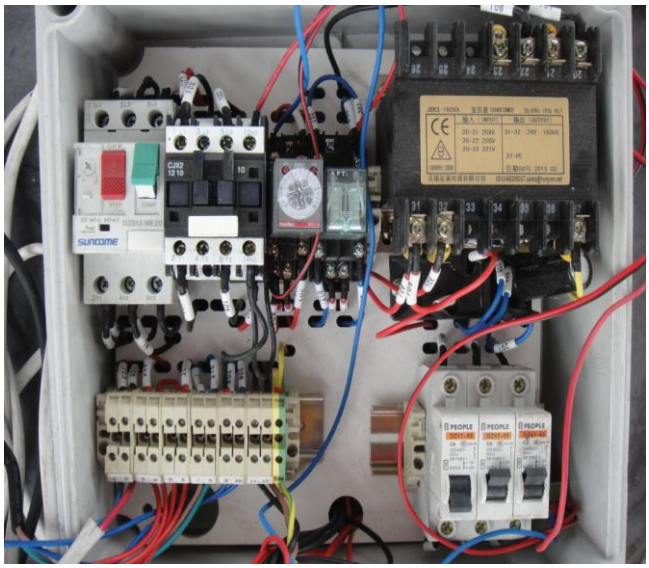
1. Driving cylinder
2. Assistant cylinder
3. Electrical release valve
4. Lowering throttle valve
5. Motor
6. Coupling
7. Gear pump
8. One-way valve
9. Over-flowing valve
10. Anti-surge valve
11. Cushion valve
12. Emergent unloading valve

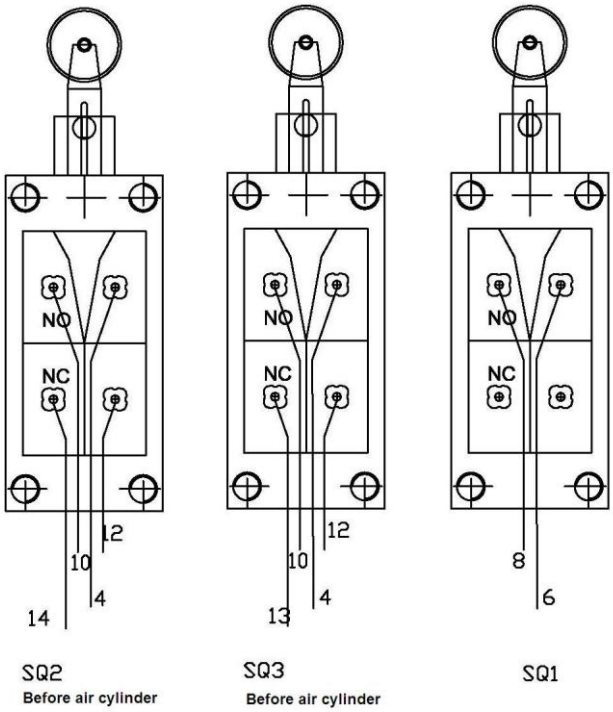
Annex5, Wiring diagram

Single phase


N
L1
PE
1.5mm2
Blue
1.5mm2
Brown
(black)
1.5mm2
Yellow-
green
QS
Power switch
LW26GS-20/04
N1
T
QF
Circuit breaker
DZ47-63 C32/ 2P
QF1
Circuit breaker
DZ47-63 C1/1P
T2
N2
T1
T
Transformer
JBK3 40VA220V-24V
1.5mm2
Black
1.5mm2
Yellow-
green
2
1.5mm2
Red
GND
1.5mm2
Red
QF2
Circuit breaker
DZ47-63 C3/1P
0
3
KM
Contactor
CJX2-1210/AC24
1.5mm2
Blue
N2
1.5mm2
Brown
(black)
W
Motor
220V
2.2KW 1PH
M
2~
GND

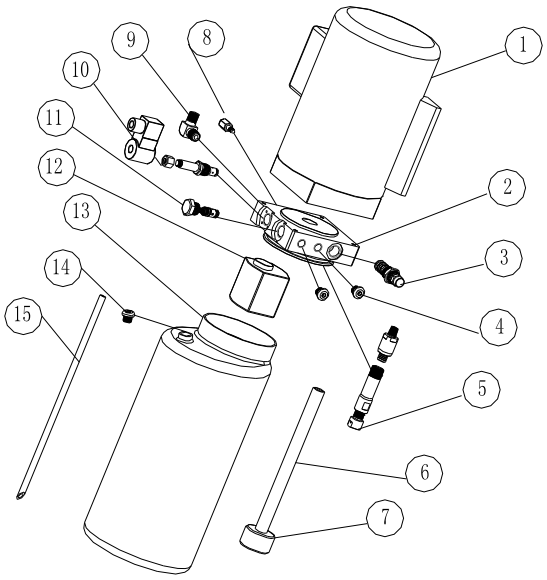

TJC16-4A
TJC16-4Y
SQ3
8108
TJC16-4A
TJC16-4Y
SQ2
8108
SB2
SB1
KA
TJC16-2A
SQ1
8104
TJC16-2Y
SB1
E
UP button
Y090-11BN
KM
AC contactor
CJX2-1210/AC24
HL
Power indicator
AD17-22G-AC24
Green
SB
Emergency stop
Y090-11ZS/Red
1.5mm2 Red
1.5mm2 Red
3
10
4
5
7
6
8
0





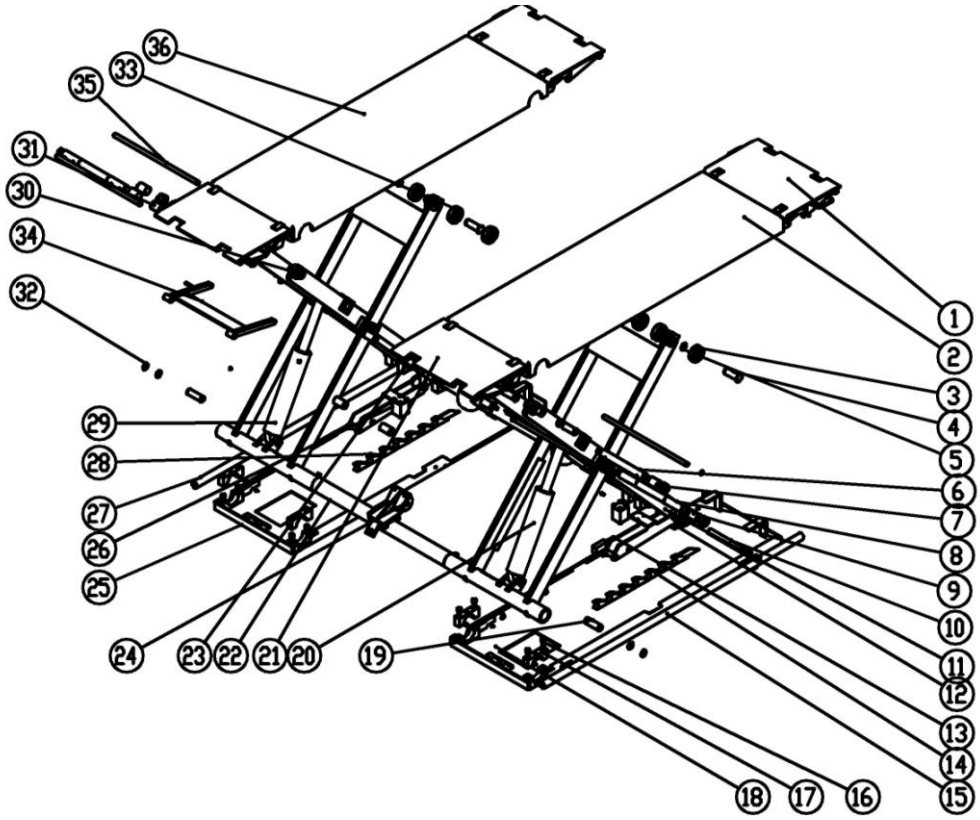
Annex 6，Separate diagrams for the lift

For the pump:



S/N	DESCRIPTION	QTY
1	MOTOR	1
2	HYDRAULIC BLOCK	1
3	OVERFLOW VALVE	1
4	FITTING	2
5	CUSHION VALVE	1
6	ABSORBING OIL PIPE	1
7	OIL FILTER	1
8	THROTTLE VALVE	1
9	OIL HOSE TIE-IN	1
10	ELECTRICAL UNLOADING VALVE	1
11	SINGLE-WAY VALVE	1
12	GEAR PUMP	1
13	OIL TANK	1
14	OIL TANK COVER	1
15	OIL BACK PIPE	1

For the lift



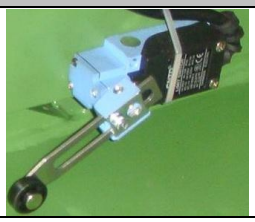
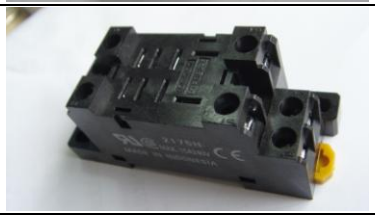
S/N	Name	Drawing #/Spec.	Qty	Note
1	Ramp assembly A	JA3000S-E-A22	4	
2	Platform assembly B	JA3000S-E-A20	2	
3	Small idler wheel	JA3000S-E-A8	8	
4	Shaft	JA3000S-E-A9	4	
5	Circlip for the shaft	D25	4	
6	Swing shaft	JA3000S-E-A17	2	
7	Self-lock screw	JA3000S-E-A18/ M27	8	
8	X shape shaft	JA3000S-E-A7	2	
9	Oilless bearing	3045	12	
10	Security shaft	JA3000S-E-A5-B14	2	
11	Driving assembly	JA3000S-E-A5	2	
12	Nylon Slider	JA3000S-E-A5-B6	2	
13	Limit switch		1	
14	Safety lock holder	JA3000S-E-A5-B15	1	
15	Feet protector	JA3000S-E-A1-B7	2	
16	Inside hex screw	M10x35	8	
17	U-shape block	JA3000S-E-A4	8	
18	Right base assembly	JA3000S-E-A2	1	
19	Fasten shaft for oil tank	JA3000S-E-A16	2	
20	Oil cylinder(right)	JA3000S-E-A15-B2	1	
21	Guiding plate B	JA3000S-E-A23	2	

22	Drive assembly	JA3000S-E-A3	1	
23	Nylon slider	JA3000S-E-A5-B6	2	
24	Prop-trough	JA3000S-E-A25-B2	1	
25	Left base assembly	JA3000S-E-A1	1	
26	Air tank	CQ2B32x20	2	
27	Feet protector	JA3000S-E-A1-B7	1	
28	Safety lock holder	JA3000S-E-A5-B15	1	
29	Oil cylinder (left)	JA3000S-E-A15-B1	1	
30	Shaft to fasten platforms	JA3000S-E-A21	4	
31	Oilless bearing	2525	4	
32	Circlip for the shaft	D25	8	
33	Small idler wheel	JA3000S-E-A22-B5	8	
34	Prop assembly	JA3000S-E-A22-B6	4	
35	Shaft of guiding plate	JA3000S-E-A22-B4	8	
36	Platform assembly A	JA3000S-E-A19	1	

Annex 7.Spare parts list

Spare parts list---electrical system

S/N	Material No.	Name	Spec.	Qty	Unit	Pic.
1	321001	Power switch	LW26GS-20/04	1	Pcs	
2	322008	Button	Y090-11BN	1	Pcs	
3	342021	Power indicator	AD17-22G-AC24	1	Pcs	
4	320078 320084	Transformer	JBK3-40VA380V-24 V JBK3-40VA220V-24 V	1	Pcs	
5	330004	AC contactor	CJX2-1210/AC24	1	Pcs	
6	327004 327002	Circuit breaker	DZ47-63 C16/3P DZ47-63 C32/2P	1	Pcs	
7	327016	Circuit breaker	DZ47-63 C1/1P	1	Pcs	
8	327003	Circuit breaker	DZ47-63 C3 /1P	1	Pcs	
9	321024	Limit switch	ME8104	1	Pcs	

S/N	Material No.	Name	Spec.	Qty	Unit	Pic.
10	321032	Limit switch	8108（TZ8108）	2	Pcs	
11	322010	Emergency stop	Y090-11ZS/red	1	Pcs	
12	336012	Bridge rectifier	KBPC5A-35A	1	Pcs	
13	335007	Capacitor	4700UF/50A	1	Pcs	
14	326009	Relay	LY2NJ/DC24	1	Pcs	
15	326011	Relay holder	PTF-08A-E	1	Pcs	
18	328004	Control box	190*430*135	1	Pcs	

Spare parts list---machine part

S/N	Name	Drawing #/Spec.	Qty	Note
1	Self-lock screw	JA3000S-E-A18/ M27	8	
2	Security shaft	JA3000S-E-A5-B14	2	
3	Nylon Slider	JA3000S-E-A5-B6	2	
4	Limit switch		1	
5	Safety lock holder	JA3000S-E-A5-B15	1	
6	Feet protector	JA3000S-E-A1-B7	2	
7	U-shape block	JA3000S-E-A4	8	
8	Oil cylinder (right)	JA3000S-E-A15-B2	1	
9	Nylon slider	JA3000S-E-A5-B6	2	
10	Air cylinder	CQ2B32x20	2	
11	Safety lock holder	JA3000S-E-A5-B15	1	
12	Oil cylinder (left)	JA3000S-E-A15-B1	1	

Annex8，Size and weight requirements on vehicles

Model	A (mm)	B (mm)	C (mm)	D (T)	E (T)	F (T)	G (T)
JA3000S-E	1600	2000	110	1.8	1.2	1.2	1.8